

Surf to ... Nucleonica ... web driven nuclear science

URL: <http://www.nucleonica.net>

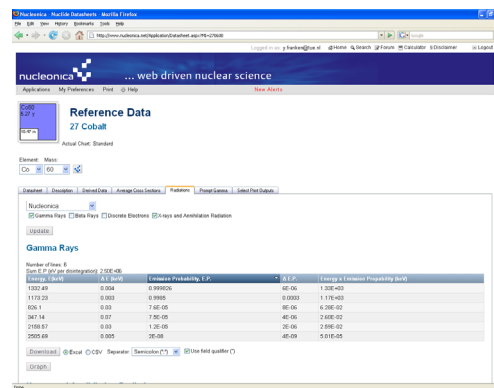
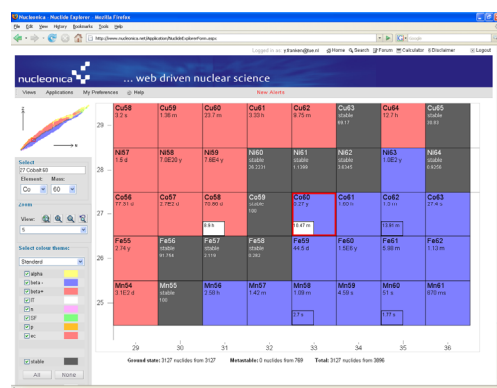
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Language: English

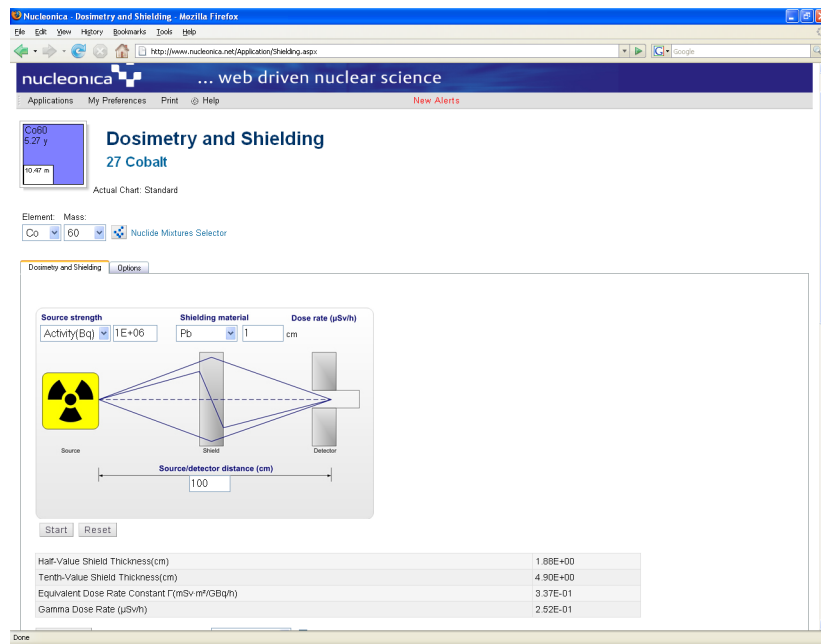
Key words: nuclear data, radionuclides, nuclear energy



Nucleonica is a so-called ‘web portal’ that provides information on radionuclides for scientists and other professionals in fields such as nuclear energy, radiation protection, radiochemistry, etc. The site was developed by the Joint Research Centre of the European Commission (EC-JRC). A wealth of information is available, both on screen and downloadable. Everybody can register for free and use the chart of nuclides, including basic nuclear decay information.



Unfortunately more advanced options, such as dosimetry and shielding, are not available for free but must be paid for in the form of a yearly license fee. Prices vary from 245 to 445 euro per year. The module ‘Dosimetry and shielding’ is highly recommended. A single radionuclide, or a mixture of radionuclides, can be chosen as a radiation source for dosimetry and shielding calculations. A very nice feature in this module is the option to calculate directly the necessary shielding to obtain a certain dose rate. The shielding methodology is based on the well-known point kernel method with buildup factors.



All information provided on the web portal is also available elsewhere, e.g. in textbooks, online databases or can be obtained using software like *Microshield*. At this moment, radiation protection information is quite scarce; the focus is on nuclear and scientific applications. The technical method of a web portal is very convenient indeed. The main advantage is that users don't have to install any software, all data and software is server-based. The provider takes care of maintaining the datasets and software and can add user options in response to customer demand.

[YF]